

2. The peculiar and definite organs at the base are sense organs, and are necessary in giving the halteres functional value.
3. These sense organs are in some way aroused by the changes in position, and thru them the central nervous system is enabled to control the process of balancing.

#### A CONVENIENT DROPPER FOR USE IN CUTTING CELLOIDIN SECTIONS

A very useful aid in cutting celloidin sections is shown in the accompanying figure (Plate II). This piece of apparatus was in stock when the writer assumed charge of this laboratory, and he is not acquainted with its history. While it is not listed in any of the dealers' catalogs that the writer has examined, it may be made at a very slight cost in any machine shop.

It consists of a glass oil-cup (1) of about 40 cc. capacity, with a mill-head (2) at the top to regulate the flow of alcohol. The cup is fastened to a bar (3), which is slotted for about  $\frac{3}{4}$  its length to receive the bolt that extends through the column (4) that holds the cup a few inches above the knife (5). The head of the bolt mentioned above is of the proper shape to fit into the slot in the knife-carrier, and the thumb-nut (6) on the other end of the bolt tightens at one time both the bar (3) to the column (4) and the column to the knife carrier. This thumb-nut and its bolt, which, except in length, are exactly those (7) that hold the knife in position, make it possible instantly to adjust the cup so that the alcohol will fall on any desired part of the knife; and since the apparatus is attached to the carrier it will always be over the same part of the knife even in microtomes where it is the knife that moves. If all the metal parts are nickel-plated it will obviate trouble in drying off the alcohol to prevent rusting.

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#### CRITICAL ILLUMINATION FOR THE MICROSCOPE

In a brief paper (J. Queck. Micr. Club. Nov. 1912) Reid gives some important suggestions for critical illumination, which will certainly be of value to beginners in the use of the microscope and to many older users who have not given critical attention to the sub-